CHAPTER XI

Keynesian vs. Monetarist Doctrine: Policy Issues

Keynesians and Monetarists disagree on many policy issues, the most important among them are:

A. Rules vs. Discretion
B. Monetary vs. Fiscal Policy
C. Monetary Aggregates vs. Money Market Conditions as a Policy Guide
D. Fixed vs. Flexible Exchange Rates
E. Rational Expectations
F. Trade-off vs. No Trade-off
G. Structural Model vs. Single Equation (Reduced Form) Approach.

RULES VS. DISCRETION

Should monetary policy be conducted by fixed rules or by discretion of the authority? Keynesians favor discretion. Monetarists favor rules. Keynesians support their position on the ground that the economy is inherently unstable. Discretionary action helps to stabilize it. There is no self-corrective mechanism in the economy. Nor is there any assurance that self corrective tendencies will prevail if policymakers stick to fixed rules. If the economy wanders off its ideal path, discretionary action is needed to put it back on course. Moreover, long run relationships between policy instruments and economic activity are not precisely known and thus proper rules cannot be determined. But the short run impact of policy instruments is known with some degree of certainty, making it possible to improve expected outcomes with discretionary actions. Furthermore, Keynesians argue, such actions have worked well in the past in the

United States as well as in other industrialized nations.

Monetarists, proponents of rules, argue that we do not have adequate knowledge about the economy and thus the authority with discretionary power is likely to do more harm than good. According to Milton Friedman, the monetary authority occasionally has moved in the wrong direction.[1] More frequently, it moved in the right direction but erred by moving either too late or too far. Monetarists claim that the authority would do better if it follows predetermined rules. But rules are not looked upon as so rigid that they cannot be broken. They consider rules as a temporary solution because the possibility always exists that, one day, better ones may be found. Milton Friedman says that, in case of major disturbances, the authority may be allowed to depart from rules. Monetarists do not view rules as a means to achieve the best result, but rather a procedure that will, on the average, provide a reasonably satisfactory result.

The rule often advocated by Monetarists is a steady rate of money growth. They believe that such a rule would provide a stable monetary framework for economic growth without itself being a source of instability and disturbance. According to them, major inflations and deflations of the past were caused by excessive variations in the money supply.

Keynesians argue against the rule of a steady rate of money growth on the ground that the economy is inherently unstable. The money supply needs to be increased well above the rate suggested by the rule when the aggregate demand for goods and services is unusually weak or when the demand for liquidity is unusually high. If the economy is experiencing severe cost push inflation, monetary growth which is higher than the fixed rate may have to be tolerated for some time because at that time the attempt to curtail the money supply to meet the fixed rule may cause adverse effects on the economy. Furthermore, the monetary authority has a number of other responsibilities such as the maintenance of favorable credit conditions, which may at times require a change in the money supply well beyond the rate suggested by the rule. Arthur Okun argues that the rule of a steady rate of monetary growth would not help much because it would be a rare coincidence for the same rate to be appropriate two years in a row.[2] Franco Modigliani, another Keynesian, claims that a stable money growth does not guarantee a stable economy. In the post World War II era, there were two periods (one, beginning of 1953

through the first half of 1957 and the other, 1971 through 1974) when the money supply increased at a fairly steady rate. But, during both periods, the economy experienced wild fluctuations in output and prices.[3]

FISCAL VS. MONETARY POLICY

Controversy exists between Keynesians and Monetarists as to the strength of fiscal and monetary policies. Keynesians claim that both are potent weapons: how much each affects the economy depends upon circumstances. They add that fiscal policy works faster than monetary policy. Monetarists, on the other hand, claim that the effect of fiscal policy is weak and of monetary policy, strong. They further assert that monetary policy works faster.

Keynesians say that the effect of pure fiscal policy depends upon the size of shift of IS and slopes of both IS and LM. (A pure fiscal policy exists when a change in expenditure or taxes affects income but leaves the money supply unaffected.) Suppose the fiscal authority pursues an expansionary policy by increasing government spending and uses bonds to finance it. An increase in government spending will shift IS to the right. As shown in Figure 11-1, such a policy will be most effective if IS intersects LM in the liquidity trap range (where LM is perfectly elastic); somewhat effective if it occurs in the intermediate range (where LM is somewhat elastic); and completely ineffective if it occurs in the classical range (where LM is vertical or perfectly inelastic). In the liquidity trap range, such an action will be most effective because the shift of IS (from IS_1 to $IS_{(1+g)}$) does not increase the interest rate, thereby causing no adverse effect on private investment. However, in the classical range, similar action causes such an increase in the interest rate that private investment equal to the increase in government spending is crowded out. In the figure, when the shift occurs from IS_3 to $IS_{(3+g)}$ the interest rate rises from i_3 to $\hat{i}_3$. But income stays at the same level, i.e., Y_3. The interest rate rises because the increase in government spending causes an increase in its borrowing from the market. In the case of the intermediate range, similar action is somewhat effective because only a portion of its effect is offset by a reduction in private investment. In Figure 11-1, when shift occurs from IS_2 to $IS_{(2+g)}$, the interest rate rises from i_2 to $\hat{i}_2$ and income, from Y_2 to $\hat{Y}_2$. Thus, the effect of fiscal action

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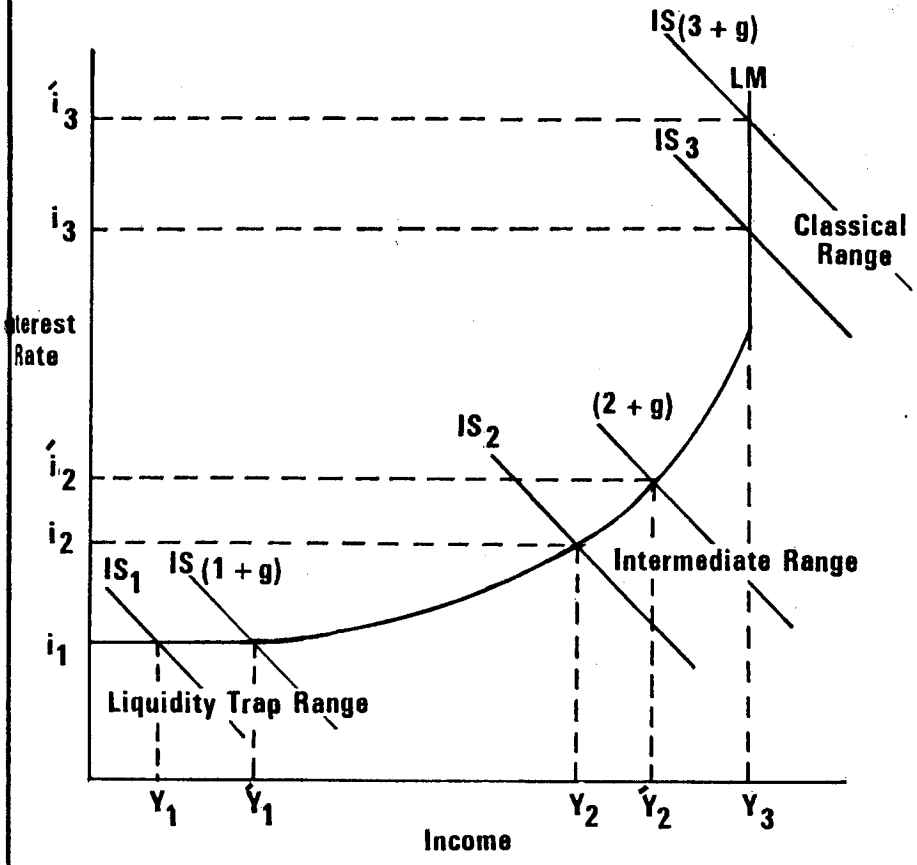
depends, among other things, upon the slope of the LM curve. The steeper the LM curve, the less will be its effect. Keynesians claim that there is overwhelming evidence that the short run LM is not vertical: the demand for money is negatively related to the interest rate.

FIGURE 11-1

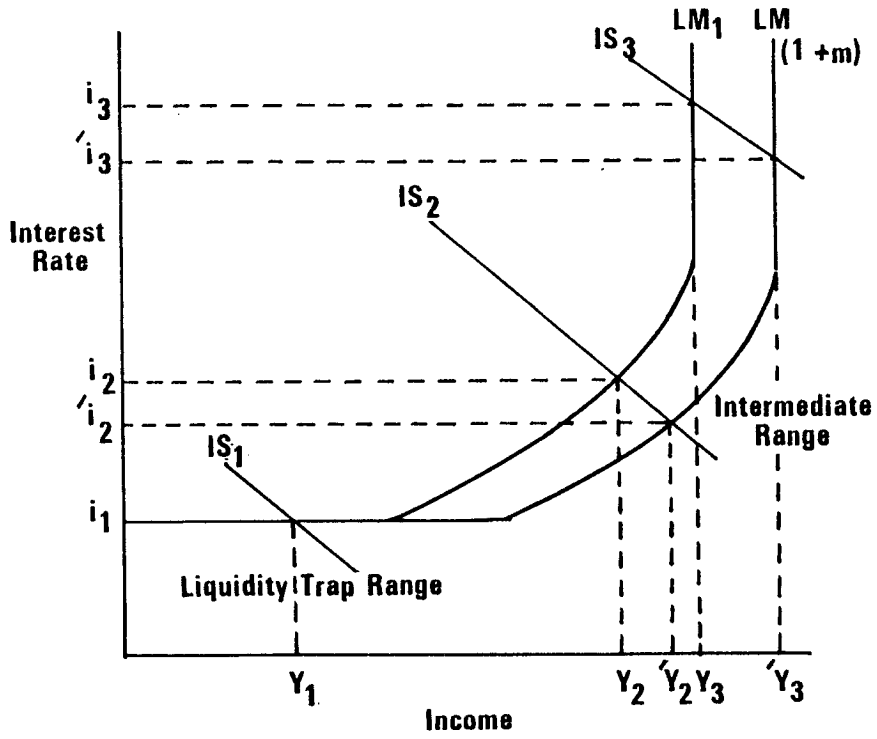
EFFECT OF FISCAL POLICY ON INCOME



Regarding monetary policy, Keynesians claim that it is completely ineffective when LM is in the liquidity trap range, partially effective when it is in the intermediate range, and most effective when it is in the classical range (Figure 11-2). Suppose the monetary authority increases the money supply to stimulate the economy. It will shift LM to the right, from LM_1 to LM $(1+m)$. If LM is in the liquidity trap range, an increase in the money supply will be fully absorbed by an increase in the demand for money (demand for idle cash balances). As a result, the interest rate will remain unchanged. If the interest rate does not decline, neither investment nor income will rise. Income will remain at Y_1 level.

FIGURE 11-2

EFFECT OF MONETARY POLICY ON INCOME



If the money supply is increased when LM is in the intermediate range, the interest rate will fall from i_2 to i'_2. As a result, investment and, consequently, income will rise. Income will rise from Y_2 to Y'_2. The interest rate falls because the increase in the money supply is only partially absorbed by the increase in the demand for idle cash balances.

Monetary policy will be most effective if the money supply is increased when LM is in the classical range. Since here the demand for money is perfectly interest inelastic, an increase in the money supply will cause a significant reduction in the interest rate. This will, in turn, produce a large stimulative effect on investment. Consequently, income will rise. In Figure 11-2, when LM shifts from LM_1 to $LM_{(1+m)}$, the interest rate falls from i_3 to i'_3 and income rises from Y_3 to Y'_3.

Monetarists maintain that pure fiscal policy has a weak impact on the economy. If government increases its expenditure to stimulate the economy and expenditure is financed by borrowing from the public, its effect will be weak because it will crowd out private expenditure by increasing the interest rate. (In the IS and LM framework, this will happen when LM is relatively interest inelastic.) The effect will also be weak, if the increased expenditure is financed by taxes because it will leave taxpayers less to spend. Monetarists recognize that fiscal policy has a re-allocative effect on long run output. If an expenditure program re-allocates resources from consumption to investment (say, it cuts down low income subsidies and increases expenditure on education), long run output will rise. Output will also rise if a tax program is designed to encourage private investment. But they argue that such effects are minor and take a long time before they appear. Monetary policy, on the other hand, produces a strong impact (stronger than fiscal policy) because it does not cause any crowding out effect.

As explained earlier, fiscal policy is completely ineffective if LM is vertical (demand for money is perfectly interest inelastic). Friedman says that though LM is not vertical, it is steeper than what Keynesians think.[4] Furthermore, he asserts that there is a much broader category of interest sensitive private expenditures than Keynesians think, which reduce the size of shift of IS caused by a fiscal action. (Hamm says that the size of shift of IS is reduced significantly, if consumption expenditure is highly sensitive to the interest rate because the interest

sensitivity of business expenditure is already taken into account in the slope.[5]) Thus, a small shift in IS combined with a steeply sloped LM produces a weak impact on income. The St. Louis model (a major Monetarist model) shows that the effect of pure fiscal policy on income is not only minor but also short lived. At the end of five quarters the effect completely disappears. However, the MPS model (a major Keynesian model) shows that the same policy exerts a significant effect lasting for several years.

Both groups agree that fiscal policy has a longer policy lag (time required to implement a change in policy after its need is recognized) than monetary policy, because most of the changes in fiscal policy have to be approved by the Congress and speed has never been one of the Congress' strong points. Monetary policy can be changed within a short time because the Federal Reserve has complete authority in such matters.

Keynesians and Monetarists differ, though, about the outside lag (time required for the economy to respond to a change in policy after it is implemented). Keynesians claim that fiscal policy has a shorter outside lag than monetary policy. Monetarists claim just the opposite. Keynesians argue their position on the ground that most fiscal actions, such as government expenditure and changes in personal income tax, affect the economy almost immediately. But this is not the case with monetary actions. It takes time for an action of the Federal Reserve to affect the money supply; for a change in the money supply to affect the interest rate; and for a change in the interest rate to affect the economy. Monetarists disagree. They support their position with empirical evidence such as the study of Andersen and Jordan, which concludes that monetary actions affect the economy faster than fiscal ones.[6]

MONETARY AGGREGATES VS. MONEY MARKET CONDITIONS AS A POLICY GUIDE

Whether monetary policy should be guided by monetary aggregates or money market conditions is also debated between Keynesians and Monetarists. Monetary aggregates include such things as the money supply and total reserves. Money market conditions are generally expressed on the basis of short-term interest rates, free reserves and bank borrowings from the Federal Reserve.

Monetarists favor monetary aggregates as a policy guide, i.e., indicators and operating and intermediate targets should be expressed in these terms. Keynesians advocate the use of both monetary aggregates and money market conditions. Monetarists claim that since the money supply (an important monetary aggregate) is the main source of disturbance, the economy will be better regulated if monetary aggregates are used. Keynesians, however, disagree. They say that the exclusive emphasis on monetary aggregates means that money market conditions don't count. But there are times when the monetary authority has to pay close attention to them. For example, it has to pay close attention to interest rates when they seriously affect the capacity of thrift institutions to perform their intermediary role between savers and the mortgage market.

As indicated in Chapter IX, an ideal indicator is that which is responsive to policy instruments and exhibits a response within a short interval. Moreover, it is not influenced by nonpolicy variables but associated with economic activity in a somewhat predictable fashion. Monetarists claim that the money stock (a monetary aggregate) is a better indicator of monetary policy than any other variable. The study of Andersen and Jordan shows that changes in the money stock reflect mainly discretionary actions of the Federal Reserve.[7] Studies of Friedman and Meiselman, and Keran conclude that the money stock is highly associated with economic activity, implying that the latter can be predicted from changes in the former.[8] Keynesians disagree. They say that the money stock is very much affected by nonpolicy variables such as bank lending and the public asset preferences, and it responds to policy instruments after a long lag. Keynesians further argue that, because of the reverse causation effect, the high degree of association, which Monetarists find between the money stock and economic activity, does not necessarily suggest that the latter can be reliably predicted from the former.

Keynesians say that, though monetary aggregates and measures of money market conditions are important indicators, more attention should be given to interest rates (money market conditions) because the economy is affected through them. Moreover, data on interest rates are readily available. They recognize, however, that interest rates, like monetary aggregates, are affected by nonpolicy variables. Monetarists disapprove the use of interest rates as an indicator. They argue that interest rates, at times, give a misleading signal. For example, at the time of recovery, rising interest rates reflect a growing

demand for credit. If at that time interest rates are used as an indicator, policy will be wrongly interpreted as restrictive. Moreover, Monetarists claim that changes in ultimate targets cannot be reliably predicted from interest rates.

Whether one argues for monetary aggregates or for money market conditions, it is difficult to find a variable that is completely independent of nonpolicy influences. In recent years attempts have been made to develop an index of the money stock by adjusting it for nonpolicy influences.[9] Though such efforts have not been successful, they point toward the possible development of a good indicator.

Keynesians and Monetarists also argue about the selection of operating and intermediate target variables. An ideal operating target variable is that which can be precisely measured, is achievable by the monetary authority within a short period of time, provides a visible signal to financial market participants about the intent of policy, and is related to intermediate targets in a somewhat predictable fashion. Monetarists claim that reserve aggregates (monetary base, bank reserves, nonborrowed reserves, RPDs, etc.) will be better than interest rates as operating targets when the money stock is used as an intermediate target. However, they differ among themselves as to the specific reserve aggregate to be used. Meltzer suggests that the monetary base should be used as an operating target.[10] Ruebling favors RPDs (reserves available to support private nonbank deposits) over other reserve aggregates.[11]

In recent years economists with a Keynesian bent have narrowed the choice of operating targets from a host of reserve aggregates, on the one hand, and money market conditions, on the other, to a choice between nonborrowed reserves (total reserves minus borrowing from Federal Reserve Banks) and the Federal funds rate. Studies of both Davis and Meek show that if the money stock is accepted as an intermediate target both measures—nonborrowed reserves and Federal funds rate—would be equally effective as an operating target. Each measure has advantages and disadvantages but neither one has a clear overall superiority over the other.[12] (For advantages and disadvantages of these two measures as an operating target, see Chapter IX.) Keynesians further add that if money market conditions are selected as an intermediate target, Federal funds rate would have a definite edge over nonborrowed reserves.

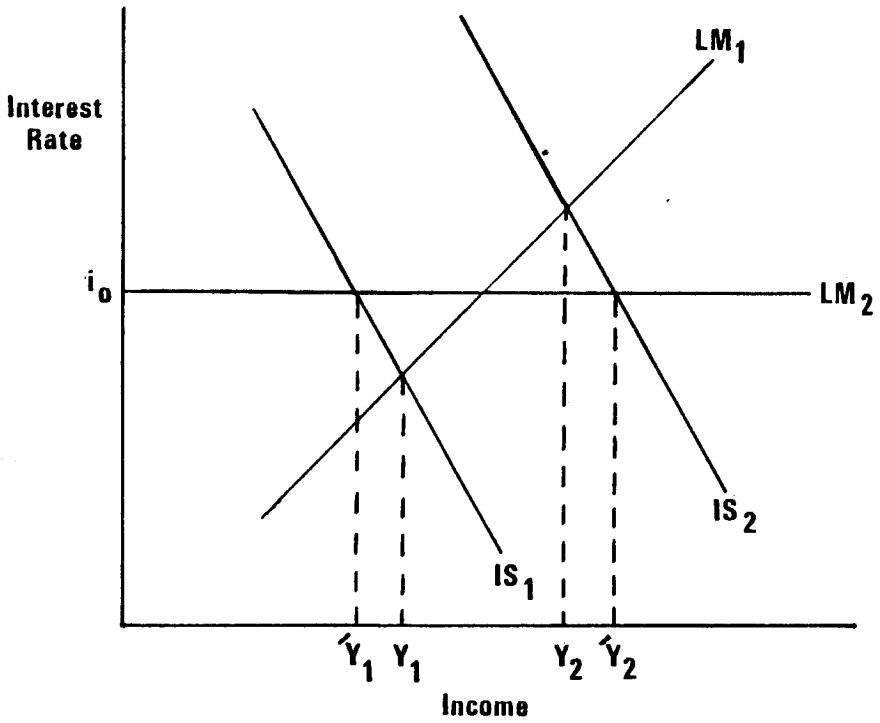
Regarding the intermediate target, Monetarists claim that the money stock is the most appropriate candidate. It can be easily controlled by operating targets and is related to the economic activity in a somewhat known fashion. Keynesians advocate that both these sets of variables—monetary aggregates and measures of money market conditions—should be used as intermediate targets. Money is important and so are interest rates. If monetary aggregates are chosen as the only target variables, they would cause fluctuations in interest rates. They add that the monetary authority should achieve targets of monetary aggregates over a long time horizon and of interest rates over a short time horizon. By doing this, it would maintain stability in interest rates at least over short periods. Keynesians believe that, over short periods, it is neither feasible to hit targets of monetary aggregates with accuracy nor is it costly in terms of ultimate objectives for failing to hit them. Davis claims that a minimum of six months is needed to hit the average target of money growth. Simulations of Davis and Corrigan suggest that even sizeable deviations from the old M_1 target, lasting up to six months, do not create any problems provided they are subsequently adjusted.[13] Monetarists disagree with Keynesians that targets of monetary aggregates cannot be achieved over shorter periods. They claim that they can be achieved provided the authority tries hard enough and uses reserve aggregates as operating targets.

Poole (a prominent Keynesian) evaluates the choice between the money stock target and the interest rate target in the LM and IS framework. He concludes that the target of money stock is superior to that of interest rate in a world where LM is stable and IS is not.[14] The opposite is true where IS is stable and LM is not. Suppose LM is stable and IS is unstable, and IS varies between IS_1 and IS_2 as shown in Figure 11-3. Under these conditions, if the target of money stock is used (i.e., its amount is fixed at a certain level), the position of LM_1 will be fixed and known, and income will vary between Y_1 and Y_2. But if the target of interest rate is used and is set at, say, i_0, income will vary between $\hat{Y}_1$ and $\hat{Y}_2$. The range of income variation will be wider than the previous case. Hence, the target of money stock is better where LM is stable and IS is not.

Suppose now IS is stable and known, and LM varies between LM_1 and LM_2 as shown in Figure 11-4. With a money stock target, income will vary between Y_1 and Y_2. But, with an interest rate target, LM will be fixed at LM_3 so that it intersects IS at a point that provides the desired level of income (Y_3). Unexpected shifts in LM will not be per-

FIGURE 11-3

EFFECT OF MONEY STOCK AND INTEREST RATE TARGETS ON INCOME WHERE "LM" IS STABLE AND "IS" IS NOT

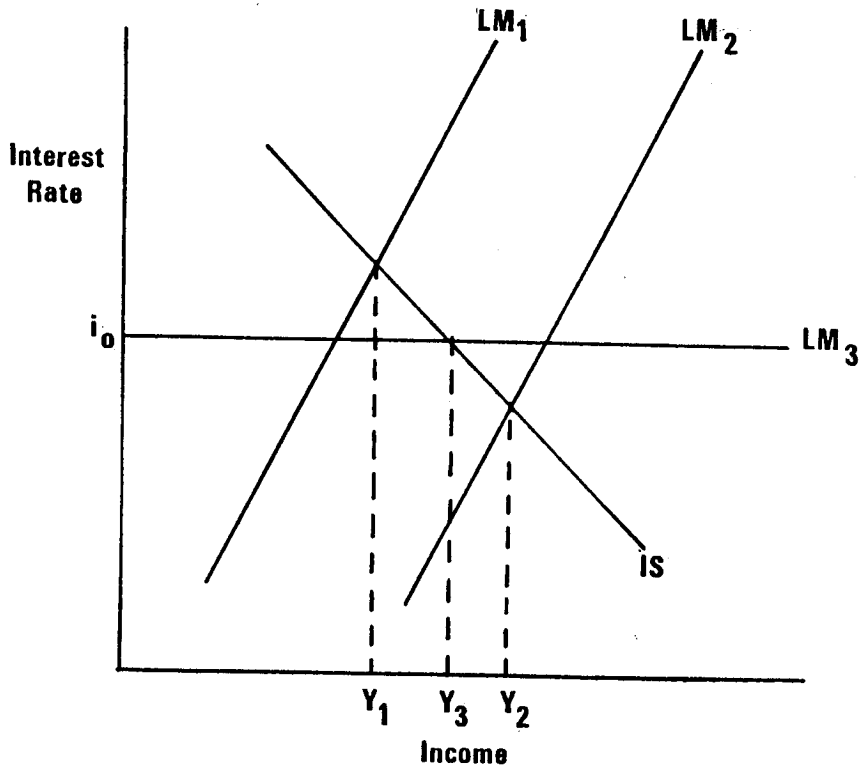


mitted to affect the interest rate. The authority will adjust the money stock in response to a shift in LM in order to keep the interest rate on target. Hence, the target of interest rate will prove better where IS is stable and LM is not.

No matter what Keynesians think about monetary aggregates as a guide to monetary policy, the Federal Reserve in recent years has started to place greater emphasis on them. Prior to 1970, the Federal Open Market Committee (FOMC) emphasized money market conditions. Since that year, it has made greater use of money stock measures to define its policy objectives and to guide open market operations between FOMC meetings.

FIGURE 11-4

EFFECT OF MONEY STOCK AND INTEREST RATE TARGETS ON INCOME WHERE "IS" IS STABLE AND "LM" IS NOT



FIXED VS. FLEXIBLE EXCHANGE RATES

Though the issue of fixed and flexible exchange rates is also debated among Keynesians and Monetarists, their differences are not as sharp and distinct as they are on other issues. Keynesians favor a system ranging from almost completely fixed exchange rates to very limited flexible exchange rates. Very limited flexible exchange rates refer to systems such as crawling peg and band proposal. Under the crawling peg, the parity of a given day is determined by an average of past rates established in the market. Under the band system, exchange rates are permitted to fluctuate within a specified range, any deviation from it is corrected by direct intervention. Monetarists favor a system ranging from almost completely to a somewhat limited flexible exchange rates. Keynesians who favor a system of almost completely fixed exchange rates are Robert V. Roosa, Robert Triffin and Charles P. Kindleberger. Those who belong to the Keynesian camp, but who would allow a limited flexibility in exchange rates, are Paul Samuelson, William Poole and Gotfried Haberler. Monetarists who advocate almost completely flexible exchange rates are Milton Friedman and Harry Johnson. Monetarists such as George McKenzie accept a system that imposes a minor limitation on their flexibility.

Keynesians make their case for fixed exchange rates on the ground that it promotes international commerce since it enables merchants, investors and bankers to do business at determinable rates. Further, under this system, the balance of payments often reveals, in outlines if not in detail, mistakes and achievements of the economy. When a country's external accounts are continuously and seriously out of balance, the implication is that wage increases have exceeded productivity, investment demands have outrun resources, production of export items has been restricted, or government requirements (including overseas spending) have added undue strain on total capacity. Proponents of fixed exchange rates also claim that such a system has served the world quite well. Since the end of World War II, economic expansion has proceeded at rates never previously achieved. At least, some of this progress can be attributed to the improvement in international commerce which was made possible by fixed exchange rates.

Monetarists favor flexible exchange rates. They claim that they provide an automatic mechanism for restoring equilibrium in the balance of payments. If a country experiences a deficit in the balance

REPRODUCED AT GOVERNMENT EXPENSE

of payments, the value of its currency will depreciate. Currency depreciation helps to restore equilibrium by increasing exports and decreasing imports. Moreover, with flexible exchange rates, monetary and fiscal policies can be directed toward pursuing internal stability without being hamstrung by the balance of payments. Monetarists further argue that fixed exchange rates cause more uncertainty than flexible ones. If exchange rates are fixed and difficulty occurs in external balances, action is delayed until it reaches crisis proportions. Action is delayed because the authority has to take unpleasant measures such as imposing restrictions on imports, exports and capital movements, and deflating the economy to control wages and prices. The inaction causes a great uncertainty. However, with flexible exchange rates, uncertainty manifests itself in exchange rates promptly but gradually and does so in a way people can adjust to without any difficulty.

Keynesians do not trust the automatic mechanism of the flexible-exchange rate system in restoring equilibrium. They claim that deliberate policy actions are needed to manage the balance of payments. Further, the problem of automatically floating rates would be compounded under a less automatic system, the one which is realistically conceivable. Under a less automatic system, central banks do not abstain permanently from market intervention. Such a system creates a number of problems: First, interventions by different central banks will most probably work at cross purposes. There is only one dollar-sterling exchange rate, not two. Who will manage it? The Bank of England or the Federal Reserve System or both? Triffin, a Keynesian, says that it is just like a public bath house where each of them is equipped with a faucet that regulates the heat of the water for all of them. Bathers would come out and fight. Second, it would exhibit a strong devaluation bias since deficit countries would let their rates go down as much as necessary, while surplus countries would not allow their rates to go up as much as the free market permits. Third, it would cause global inflation. Countries whose currencies are depreciating would experience a rise in domestic prices due to a rise in exports. But countries whose currencies are appreciating would experience either no or a little decline in domestic prices because prices move up more easily than they move down. Thus, flexible exchange rates cause world wide inflation by pushing up prices of certain countries without pushing them down anywhere else, argue Keynesians.

RATIONAL EXPECTATIONS

Rational expectations are an assumption about people's behavior which state that people make economic decisions in a way that takes into account all the available information and makes it difficult to repeat their past mistakes. Information includes such things as the current and expected policy of the government. The idea of rational expectations first appeared in 1961 in an article by J.F. Muth. Recently, a number of economists, such as Thomas J. Sargent, Neil Wallace and Robert E. Lucas, used it to explain certain aspects of macroeconomics. This idea supports many of the views of Monetarists and challenges those of Keynesians.

Rationalists (proponents of rational expectations idea) claim that discretionary policy (fiscal and monetary stimulus in times of recession and restraint in times of boom) does not work because it is based upon assumptions that do not hold true in the real world. It assumes that people do not act rationally, i.e., they behave contrary to their best interest, repeatedly neglect important information they have or can have about any systematically applied policy. Or, policy action surprises people.

Rationalists explain why discretionary action is ineffective when people act rationally as follows: Suppose policymakers pursue an expansionary policy. Expansionary policy generally causes a rise in output prices. Policy will work if output prices rise and wages (a major input cost) do not because then and only then business profits will rise, thereby causing investment, and consequently production, to go up. A rise in output prices reduces real wages. If workers behaved rationally, they would guard their real wages against price increases. They would not only fully anticipate price increases, but also manage to incorporate them into their wage bargains. If workers did that, business profits would not rise and neither investment nor output would increase. Expansionary policy would cause inflation only.

They also explain the ineffectiveness of an expansionary action via interest rates. Expansion in the money stock ultimately raises the general price level. Foreseeing that outcome, lenders add an inflation premium to interest rates. If long-term interest rates relevant for business capital expansion go up by the full amount of expected inflation, as Rationalists argue happens with any foreseen inflation, exploitable opportunities for businessmen would not occur. As a result,

neither investment nor production would rise.

Expansionary action that surprises people increases output and employment by creating exploitable opportunities for businessmen. When workers do not expect expansionary action, they do not take action to protect real wages against the resulting inflation. Similarly, when lenders do not anticipate inflation, they do not add an inflation premium to interest rates. As output prices rise and production costs remain stable, exploitable opportunities for businessmen increase. Consequently, output and employment increase. Rationalists believe that policymakers can surprise people once or twice but not all the time because, after awhile, they develop an awareness of what policymakers are likely to do in any given situation. Some Rationalists go even further and state that discretionary policy will not work even if policymakers, with their ingenuity and resources, succeed in creating a surprise every time. Frequent surprises, they claim, will cause great uncertainty in people's expectations about future prices, wages and interest rates, making it difficult to predict their response to a given action. If policymakers cannot predict the nature of that response, they cannot use discretionary actions to achieve a desired outcome.

Rationalists conclude that since neither expected changes nor surprise changes in the money supply can smooth cyclical fluctuations, credibility of a policy is paramount. The only way to make any policy credible is to announce it, implement it faithfully, and avoid shifting it abruptly. Such a procedure, according to them, will create long term, steady economic growth and high employment. They add that a steady growth in the money supply, as advocated by Monetarists, will not have a detrimental effect on employment levels.

Critics argue that Rationalists expect too much wisdom and perception from the public. But supporters say that the validity of rational expectations does not require that every person or businessman be the complete seer of future prices and other economic events. In the case of the labor sector, only union leaders, not each and every rank-and-file member, need to have an informed view about what government policy is and what its consequences for future prices are likely to be because they are the ones who participate in bargaining. In the case of the financial sector, only large borrowers and suppliers of funds are expected to have such wisdom. Small borrowers and investors can learn what the experts are expecting from various published sources

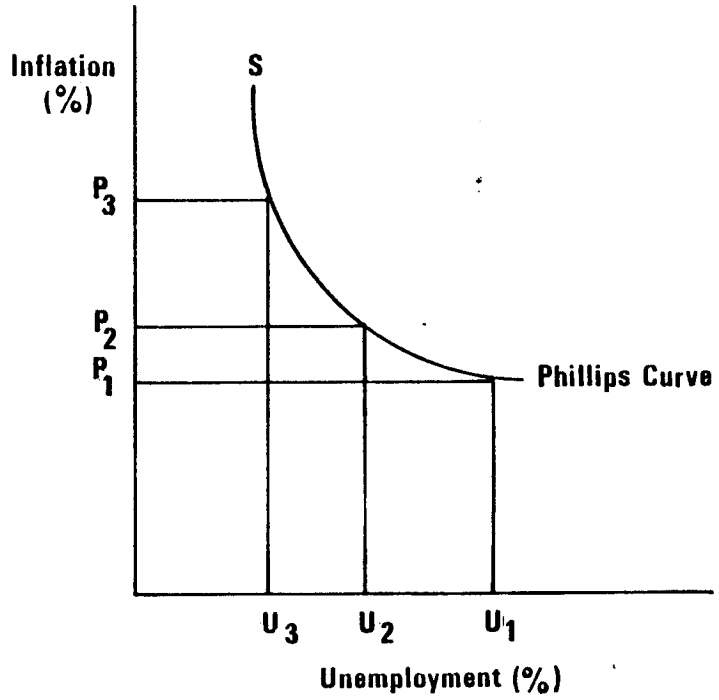
such as newspapers and newsletters.

TRADE-OFF VS. NO TRADE-OFF

Keynesians and Monetarists also differ on the issue of inflation-unemployment trade off (Phillips curve). Keynesians claim that there is a trade-off, meaning that unemployment can be lowered by accepting inflation. The Phillips curve, shown in Figure 11-5, shows that the inflation rate is P_1 at U_1 unemployment rate. If we want to lower the unemployment rate to U_2, we must be willing to accept a higher inflation rate, i.e., P_2, and so on. Monetarists, on the other hand, assert that there is no permanent trade-off, that it may exist in the short run only. In the long run, there is no trade-off and the Phillips curve is completely vertical.

FIGURE 11-5

PHILLIPS CURVE



REPRODUCED AT GOVERNMENT EXPENSE

Monetarists explain the absence of a permanent trade-off this way: Suppose that there is price stability and the economy is operating at the natural rate of unemployment. (The natural rate of unemployment is the rate at which, given the frictions and structural characteristics of the economy, both labor and product markets are at equilibrium, and expected inflation equals actual inflation.) The authorities take an expansionary action to stimulate the economy. This bids up both output prices and wages. Since output prices rise more rapidly than wages, real wages decline. When real wages decline, business profits rise. The rise in business profits causes a rise in investment and, consequently, in production and employment. At this point, the trade-off exists because the inflationary stimulus causes a decline in unemployment. But this will not last long. At first, workers are fooled because they failed to recognize that inflation was eroding their real wages. But, over time, they become wiser. They realize that inflation is hurting them. They learn not only how to fully anticipate inflation but also how to incorporate it in wage bargains. When money wages catch up with price increases, real wages return to the pre-inflation level. The rise in real wages cause a cutback in production and employment, thereby increasing unemployment to the natural level. When this happens, the trade-off ceases to exist. Whatever is gained in the beginning in the way of reduction in unemployment is lost in the end.

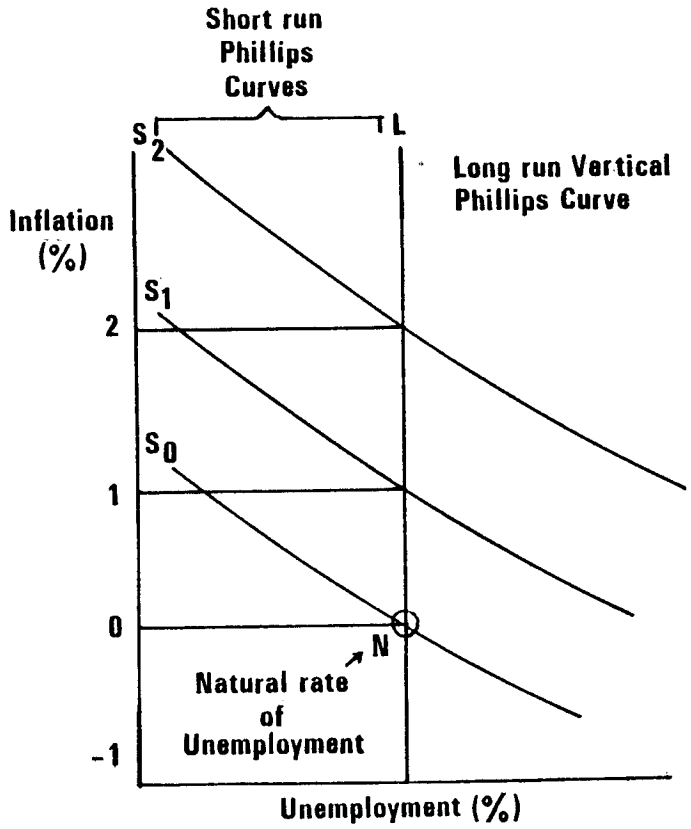
Policy implications of the Monetarist view are as follows:

1. The attempt to hold unemployment below the natural rate only accelerates inflation. Maintenance of unemployment below the natural rate requires that real wage rates be kept low enough to induce businessmen to expand investment. This can be achieved only by increasing inflation at a rate higher than what workers expect. Alternately stated, actual inflation must be kept running continuously ahead of the expected inflation that workers incorporate into their wage demands. Since expected inflation always rises in an attempt to catch up with actual inflation, the latter must be continuously accelerated. Hence, the attempt to hold unemployment below the natural level only accelerates inflation further.
2. Since unemployment cannot be kept below the natural rate for long and the natural rate is consistent with any rate of steady inflation, the best thing for policymakers to do is to strive for a zero rate of inflation. The natural rate is consistent with any

rate of inflation because at that rate the Phillips curve is vertical (see Figure 11-6).

FIGURE 11-6

SHORT AND LONG RUN PHILLIPS CURVES



3. To hit a lower inflation rate target, policymakers have a choice between a low unemployment rate for a long period of time or a high unemployment rate for a short period of time. To achieve such a target, slack (excess supply) has to be created in the economy. Slack curbs inflationary expectations (an important source of inflation) by causing the actual rate to fall below the expected rate, resulting in a downward revision of the latter. If policymakers wish to achieve a lower inflation rate fast, a large amount of slack has to be created. The economy will experience a high unemployment rate but only for a short period of time because a large amount of slack is required for faster reduction in inflationary expectations. The high unemployment rate will last for a short duration because the fast decline in inflationary expectations will cause a fast decline in the factor prices which, in turn, help to reduce unemployment. Conversely, if policymakers want to achieve a lower inflation rate gradually, a small amount of slack is needed. This produces a relatively low level of unemployment for a long period of time.

Rationalists go one step further and claim that the trade-off does not exist even in the short run. As explained earlier, trade-off results if people cannot accurately anticipate inflation or do not act on it, or both. If people act rationally neither of them will occur. Except for a very short period, when unavoidable surprise is caused by a purely random shock, price expectations will always be correct and the economy will always be at its long run equilibrium (natural level). In such an economic environment, no exploitable trade-off exists. Stabilization policy has no effect on real variables.

Keynesians reject the inflation-employment trade-off views of both Monetarists and Rationalists. (As explained earlier, Monetarists claim that the trade-off exists only in the short run. Rationalists claim that it does not exist at all.) Keynesians point out that a number of studies show that the trade-off exists not only in the short run but also in the long run.[15] They add that the long-run Phillips curve is steeper but not vertical. Keynesians concede that it is possible that over a very long period, e.g., several decades, steady inflation might cause the curve to become vertical. But this does not mean that stabilization policy has no role to play. Policy can be effectively used even if trade-offs occur only during short periods.

Keynesians argue that the views of the Rationalists are based on assumptions that are highly implausible. Rationalists assume that information used to form expectations can be obtained and processed without any cost. But nothing is free in this world. If individuals have to pay for acquiring and processing information, many of them might

not use it in forming their expectations, and thus expectations in many cases might not be formed rationally. Secondly, Rationalists assume that private forecasters possess as much information about the inflationary process and the resources to process it as do the policymakers. But this is not true. Thirdly, Rationalists assume that prices respond fully and immediately to anticipated changes in monetary growth and other events. By making this assumption, Rationalists deny that prices are sticky and costly to adjust. Department stores, for example, may not immediately increase prices of their merchandise when they anticipate an increase in them because of the cost of changing the price tag of each and every item and for other reasons. If these assumptions are not valid, the conclusion based on them—the Phillips curve is vertical both in short and long run—will not be valid either.

Some Keynesians argue that if workers accept a reduction in real wages because of a rise in prices, it does not mean that their behavior is irrational. They say that workers care more about relative wages than about absolute wages. Since inflation hits all workers alike, their relative wage relationships are not affected.

STRUCTURAL MODEL VS. SINGLE EQUATION (REDUCED FORM) APPROACH

Keynesians and Monetarists also argue about how the effect of a monetary or fiscal action on economic activity should be measured. Keynesians advocate the structural model approach whereas Monetarists advocate the single equation (reduced form) approach. The structural model approach involves three stages: In the first stage the structure of the model is specified, which is basically a description of relationships believed to exist among economic variables (or a postulation of the transmission mechanism). These relationships are written in the form of general mathematical equations. In the second stage specific numerical values for certain coefficients that appear in structural equations are estimated. For example, one structural equation is based on the relationship between capital investment on the one hand and stock market yield and the industrial bond rate on the other. There will be as many equations as there are endogenous aggregate variables. Since economists do not yet know the statistical relationships between stock market yield and capital investment, and

industrial bond rate and capital investment, they must estimate. In the second stage economists, based upon the most recent data, estimate the average values of relationships expressed in all structural equations. The last stage is to solve the model, which, in the context of policy, is to forecast the effect of a policy action on economic activity, using the most efficient methods. In doing this, all necessary input data and input assumptions will be plugged into the model. Input assumptions, for the most part, are the values that policy variables will assume in the period to be forecasted. In the single equation approach, the effect of a policy action is measured by direct estimation of a single equation. Some measure of economic activity is regressed directly against the policy variable without specifying the transmission mechanism (or structural relationships).

Keynesians support the structural model approach on the grounds that it allows one to distinguish between direct and indirect influences of a policy action and to see how subsectors of the economy are affected, which is not possible with the single equation approach. They add that the single equation approach assumes that policy variables are completely exogenous, but they are not. If policy variables are not completely exogenous (or somewhat endogenous), it will be difficult to estimate their effect on the economy because the effect runs not only from policy variables to the economy but also the other way around.

Monetarists say that the economy is too complex to understand. How different economic variables are related to each other are not known with certainty. Under these conditions, they claim, the best way to measure the effect of a policy is to use the single equation approach because it does so directly and without constraining itself to imperfect notions of how the economy operates.

SUMMARY

Keynesians and Monetarists debate policy issues. Keynesians favor discretion over rules, while Monetarists favor rules over discretion. Keynesians claim that while both fiscal and monetary policies are potent, their effectiveness varies with circumstances. They add that fiscal policy, after it is executed, works faster than monetary policy. Monetarists assert that monetary policy is more powerful and works faster than fiscal policy. Keynesians believe that, though both

monetary aggregates and money market conditions are important as a guide to monetary policy, more attention should be given to the latter. Monetarists advocate that monetary policy should be guided by monetary aggregates alone. Regarding exchange rates, Keynesians recommend a system ranging from almost completely fixed exchange rates to very limited flexible exchange rates. Monetarists, on the other hand, recommend a system ranging from almost completely to somewhat limited flexible exchange rates. Keynesians and Monetarists also differ on the issue of trade-off. Keynesians claim that an exploitable trade-off exists. Monetarists assert that there is no permanent trade-off, and thus stabilization policy is irrelevant. Concerning the measurement of the effect of a policy action, Keynesians advocate the use of the structural model approach and Monetarists, the single equation approach.

FOOTNOTES

[1]Milton Friedman, "The Role of Monetary Policy," **American Economic Review** (March 1968), p. 15.

[2]Arthur M. Okun, "Fiscal-Monetary Activism: Some Analytical Issues," **Brookings Paper on Economic Activity: 1** (1972), p. 157.

[3]Franco Modigliani, "The Monetarist Controversy Or Should We Forsake Stabilization Policies?" **American Economic Review** (March 1977), p. 11

[4]Milton Friedman, "Comments on the Critics," **Journal of Political Economy** (September/October 1972), p. 916.

[5]Bobby L. Hamm, **Theoretical Controversy and Macroeconomic Policies: 1960's and 1970's** (Ruston, Louisiana: Louisiana Tech University, 1974), p. 19.

[6]Leonall C. Andersen and Jerry L. Jordan, "Monetary and Fiscal Actions: A Test of Their Relative Importance in Economic Stabilization," **Review: Federal Reserve Bank of St. Louis** (November 1968), p. 22.

[7]**Ibid.**

[8]Milton Friedman and David Meiselman, "The Relative Stability of Monetary Velocity and the Investment Multiplier in the United States, 1897-1958," in **Monetary Economics: Controversies in Theory and Policy**, ed. Jonas Prager (New York, Random House, 1971), p. 215 & Michael W. Keran, "Monetary and Fiscal Influences of Economic Activity," **Review: Federal Reserve Bank of St. Louis** (November 1969), p. 23.

[9]Patrick H. Hendershott, **The Neutralized Money Stock: An Unbiased Measure of Federal Reserve Policy Actions** (Homewood, Illinois: Richard D. Irwin, Inc., 1968), p. 1 & Lorraine E. Dure, "A Measure of Monetary Policy," **Economic Review: Federal Reserve Bank of Cleveland** (January-February 1973), p. 22.

[10]Allan H. Meltzer, "Controlling Money," **Reviews: Federal Reserve Bank of St. Louis** (May 1969), pp. 18-20.

[11]Charlotte E. Ruebling, "RPDs and Other Reserve Operating Targets," **Review: Federal Reserve Bank of St. Louis** (August 1972), pp. 6-7.

[12]Richard G. Davis, "Implementing Open Market Policy With Monetary Aggregate Objectives," **Monthly Review: Federal Reserve Bank of New York** (July 1973), p. 182 & Paul Meek, "Nonborrowed Reserves or the Federal Funds Rate as Desk Target—Is There Difference?" **New England Economic Review** (March/April 1975), p. 46.

[13]**Ibid.**, pp. 175-176 & Gerald Corrigan, "Income Stabilization and Short-run Variability in Money," **Monthly Review: Federal Reserve Bank of New York** (April 1973), p. 98.

[14]William Poole, "Rules-of-Thumb for Guiding Monetary Policy," in **Open Market Policies and Operating Procedures—Staff Studies** (Washington, D.C.: Board of Governors of the Federal Reserve System, 1971), pp. 139-140.

[15]O. Eckstein and R. Brinner, **The Inflation Process in the United States**, 92nd Congress, 2nd Session (Washington, D.C.: U.S. Government Printing Office, 1972); Robert J. Gordon, "Inflation in Recession and Recovery," **Brookings Papers on Economic Activity: 1** (1971), pp. 136-140; Robert J. Gordon, "Wage-Price Controls on the Shifting Phillips Curve," **Brookings Papers on Economic Activity: 2** (1972), pp. 413-416; and G.L. Perry, **Unemployment, Money Wage Rates and Inflation** (Cambridge, Mass.: MIT Press, 1966).

QUESTIONS FOR REVIEW

1. Evaluate critically the views of Keynesians and Monetarists regarding the effectiveness of fiscal and monetary policies.
2. Explain how Keynesians argue against the use of "rules" in conducting stabilization policies.
3. How does William Poole evaluate the choice between the money stock and the interest rate as a monetary target? Explain.
4. Evaluate the issue of fixed vs. flexible exchange rates in the light of current experience.
5. What do we mean by "rational expectations"? What are their policy implications?
6. Is there a trade-off between inflation and unemployment? Evaluate.
7. What is the difference between a structural model and a single equation model? Explain their pros and cons with respect to policymaking.
8. Describe in brief the major policy issues that divide economists into two groups, Keynesians and Monetarists.
9. Some economists argue, "if workers accept a reduction in real wages because of a rise in prices, it does not mean that their behavior is irrational." Evaluate this statement.
10. Discuss the policy implications of a hypothesis that a permanent trade-off between unemployment and inflation does not exist.